

Notice of Allowability	Application No.	Applicant(s)
	09/489,254	BOSSEMEYER ET AL.
	Examiner	Art Unit
	Michael N. Opsasnick	2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to amendment (filed 10/5/04) entered by virtue of RCE (filed 10/19/04).
2. The allowed claim(s) is/are 22-31.
3. The drawings filed on 21 January 2000 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/2/04
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

Vijay Chawan

VIJAY CHAWAN
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 22-31 are allowable over the prior art of record.

2. The following is an examiner's statement of reasons for allowance:

As per the independent claims, the recited limitations pertaining to receiving a plurality of test utterances, comparing the plurality of training test utterances for the speaker to form a plurality of preliminary verification decisions based on each of the test utterances, and combining each of the preliminary verification decisions to obtain a final verification decision (as taught by the equations on page 7 of the specification), is not explicitly taught by the prior art of record. Furthermore, it would not have been obvious to one of ordinary skill in the art of speaker verification to modify the teachings of the prior art of record to obtain the recited claim limitations as noted above.

Performing multiple verification decisions for speaker verification is notoriously old and well known in the prior art of record. For example, Higgins (5339385) teaches the concept of using non-enrolled user reference speaker data to measure a degree of similarity (Higgins et al, col. 4 lines 51-62). Naik receives training utterances (col. 5 lines 32-40); comparing stored utterances with user (col. 5 lines 38-40); and deriving verification score from the averaged Euclidean minimums (fig. 16, subblock 186).

Hakaridani (4516215) teaches a preprocessing technique for establishing preliminary decisions before proceeding to the next round of recognition (col. 2 lines 38-52). Ranta

(5943647) teaches a combination of recognition techniques for verification purposes (col. 2 lines 53-65, col. 3 lines 45-49). Montacie et al (6349279) teaches a dual learning and verification mode containing different phases of recognition (col. 1 lines 30-45, col. 1 lines 50-55; col. 2 lines 1-10). Mammone et al (5839103) teaches multiple classifiers matched to multiple utterances (abstract, fig. 3) combined into a final decision (Fig. 4,8). Hunt et al (5365574) teaches a side-by-side voice recognition/verification process (abstract, Fig. 4) that after a password verification, voice recognition is further used to validate the user (col. 2 lines 50-61; col. 3 lines 1-29). Kuhn et al (6141644) teaches a parallel process of speaker verification and speaker identification (Fig. 4). Li et al (5689616) teaches speaker verification tied into language measurements (abstract).

The dependent claims are allowable over the prior art of record because these claims depend from claims that have been determined to be allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (703)305-4089, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached at (703)305-4827. The facsimile phone number for this group is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (703) 305-4750, the 2600 Customer Service telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
12/4/04

Vijay Chawan
12/5/04

VIJAY CHAWAN
PRIMARY EXAMINER